

No.

8800221



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Natham Seed Co.

Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (84 Stat. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'29725K'

In Testimony Whereof, I have hereunto set
my hand and caused the seal of the Plant
Variety Protection Office to be affixed
at the City of Washington, D. C.
this 31st day of May in
the year of our Lord one thousand nine
hundred and ninety-one.

Attest

Kenneth M. Brown
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Ed Madigan
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

FORM APPROVED: OMB NO. 0581-0055

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

1. NAME OF APPLICANT(S) Latham Seed Co.		2. TEMPORARY DESIGNATION 29725K	3. VARIETY NAME JLS 10 May 1991 29725K	
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) Rt. 1, Box 12 Alexander, Iowa 50420		5. PHONE (Include area code) 515-692-3258		FOR OFFICIAL USE ONLY PVPO NUMBER 8800221
6. GENUS AND SPECIES NAME Glycine max	7. FAMILY NAME (Botanical) Leguminosae		FILING DATE Aug. 19, 1988 TIME 9:30 <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M.	
8. KIND NAME Soybean		9. DATE OF DETERMINATION 3-15-88		AMOUNT FOR FILING \$ 1800.00 DATE Aug. 19, 1988
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation				AMOUNT FOR CERTIFICATE \$ 200.00 DATE April 29, 1991
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Iowa		12. DATE OF INCORPORATION 9-1-80		
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Willard J. Latham Latham Seed Co. Rt. 1, Box 12 Alexander, Iowa 50420 PHONE (Include area code): 515-692-3258				
14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED				
a. <input checked="" type="checkbox"/> Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.) b. <input checked="" type="checkbox"/> Exhibit B, Novelty Statement. c. <input checked="" type="checkbox"/> Exhibit C, Objective Description of Variety (Request form from Plant Variety Protection Office.) d. <input type="checkbox"/> Exhibit D, Additional Description of Variety. e. <input checked="" type="checkbox"/> Exhibit E, Statement of the Basis of Applicant's Ownership.				
15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act.) <input type="checkbox"/> Yes (If "Yes," answer items 16 and 17 below) <input checked="" type="checkbox"/> No				
16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> Yes <input type="checkbox"/> No		17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> Foundation <input type="checkbox"/> Registered <input type="checkbox"/> Certified		
18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.? <input type="checkbox"/> Yes (If "Yes," give date) <input checked="" type="checkbox"/> No				
19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES? <input type="checkbox"/> Yes (If "Yes," give names of countries and dates) <input checked="" type="checkbox"/> No				
20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable. The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.				
SIGNATURE OF APPLICANT Willard J. Latham		DATE 8-15-88		
SIGNATURE OF APPLICANT President		DATE		

'29725K'

Exhibit A: 1. Origin and Breeding History of the cultivar

1. '29725K' is a soybean cultivar derived from an unstated cross by the pedigree method of breeding.

<u>2. Generation</u>	<u>Step</u>
F0	Hand Cross
F1	F1 Increase
F2	Selection
F3	Selection
F4	Selection
F5	Increase
F6	Yield Test
F7	Yield Test-Increase
F8	Yield Test-Increase
F9	Yield Test-Increase

3. Statement of Uniformity - Variant Levels

'29725K' is a uniform and stable soybean cultivar with commercially acceptable and predictable variants as follows:

for flower color, up to 0.1% white flowers.

for pubescence color, up to 0.5% gray pubescence.

for hilum color, up to 2.9% non gray, consisting of blacks, browns, tans, imperfect blacks, yellows, and buffs. The normal hilum of gray varies from moderately dark to very light. This is normal for most gray hilum types.

for height, up to 1.0% talls (4-7" taller).

Exhibit A; 2. Statement of Stability - Generations of Reproduction

The following seed reproduction procedure should be used for '29725K' to maintain its stability. Each year or every other year breeder seed will be produced from breeder seed of the previous generation. Each seed will be handpicked for uniformity, and field rogued for any off-types.

Depending on the certifying state, foundation seed will be produced from breeder seed for two generations in a foundation seed - recurrent foundation seed system or one year for each class in a foundation seed, registered seed system. Certified seed will be but one generation.

Applicant may or may not use the certification system in its reproduction program.

March 9, 1991

PVP Application No. 8800221 (29725K) Soybean

Addendum to Exhibit A: 3. Statement of Uniformity - Variant Levels

'29725K' is an uniform and stable soybean cultivar with commercially acceptable and predictable variants as follows:

for flower color, 0.09% white flowers.

for pubescence color, 0.45% gray pubescence.

for hilum color, 2.6% non gray; consisting of blacks, browns, tans, imperfect blacks, yellows and buffs. The normal hilum of gray varies from moderately dark to very light. This is normal for most gray hilum types.

In each year of test and increase the essential traits of '29725K' have remained constant and stable.

8800221

'29725K'

Exhibit B: Novelty Statement

'29725K' is most similar to the cultivar 'DSR-207' in overall appearance, but differs in several characteristics. '29725K' has gray hila, and dark green leaflets while 'DSR-207' has brown hila, and medium green leaflets.

March 9, 1991

PVP Application No 8800221 (29725K) Soybean

Addendum to Exhibit B: Novelty Statement

'29725K' is similar also to 'Preston' but differs in being shorter in stature by 6.1 inches.

	Inches in Height*
'Preston'	34.8
'29725K'	28.7
LSD(.05) +	1.2

* Ground to top-most pod.

+ The data come from an experimental trial in 1990, planted in three locations, with three replications at each location and 10 random plants measured in each replication of bordered plots.

U.S. DEPARTMENT OF AGRICULTURE
 AGRICULTURAL MARKETING SERVICE
 LIVESTOCK, MEAT, GRAIN & SEED DIVISION
 PLANT VARIETY PROTECTION OFFICE
 BELTSVILLE, MARYLAND 20705

EXHIBIT C
 (Soybean)

OBJECTIVE DESCRIPTION OF VARIETY
 SOYBEAN (*Glycine max* L.)

NAME OF APPLICANT(S) Latham Seeds	TEMPORARY DESIGNATION 29725K	VARIETY NAME
ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code) Alexander, IA 50420		FOR OFFICIAL USE ONLY PVPO NUMBER 8800221

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g.,).

1. SEED SHAPE:



1 = Spherical (L/W, L/T, and T/W ratios = ≤ 1.2)
 3 = Elongate (L/T ratio > 1.2 ; T/W = ≤ 1.2)

2 = Spherical Flattened (L/W ratio > 1.2 ; L/T ratio = ≤ 1.2)
 4 = Elongate Flattened (L/T ratio > 1.2 ; T/W > 1.2)

2. SEED COAT COLOR: (Mature Seed)

1 = Yellow 2 = Green 3 = Brown 4 = Black 5 = Other (Specify) _____

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

1 = Dull ('Corsoy 79'; 'Braxton') 2 = Shiny ('Nebsoy'; 'Gasoy 17')

4. SEED SIZE: (Mature Seed)

Grams per 100 seeds

5. HILUM COLOR: (Mature Seed)

1 = Buff 2 = Yellow 3 = Brown 4 = Gray 5 = Imperfect Black 6 = Black 7 = Other (Specify) _____

6. COTYLEDON COLOR: (Mature Seed)

1 = Yellow 2 = Green

7. SEED PROTEIN PEROXIDASE ACTIVITY:

1 = Low 2 = High

8. SEED PROTEIN ELECTROPHORETIC BAND:

1 = Type A (SP1^a) 2 = Type B (SP1^b)

9. HYPOCOTYL COLOR:

1 = Green only ('Evans'; 'Davis') 2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')
 3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')
 4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

10. LEAFLET SHAPE:

1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other (Specify) _____

11. LEAFLET SIZE:

☐ 2

1 = Small ('Amsoy 71'; 'A5312')

3 = Large ('Crawford'; 'Tracy')

2 = Medium ('Corsoy 79'; 'Gasoy 17')

12. LEAF COLOR:

☐ 3

1 = Light Green ('Weber'; 'York')

3 = Dark Green ('Gnome'; 'Tracy')

2 = Medium Green ('Corsoy 79'; 'Braxton')

13. FLOWER COLOR:

☐ 2

1 = White

2 = Purple

3 = White with purple throat

14. POD COLOR:

☐ 2

1 = Tan

2 = Brown

3 = Black

15. PLANT PUBESCENCE COLOR:

☐ 2

1 = Gray

2 = Brown (Tawny)

16. PLANT TYPES:

☐ 3

1 = Slender ('Essex'; 'Amsoy 71')

3 = Bushy ('Gnome'; 'Govan')

2 = Intermediate ('Amcor'; 'Braxton')

17. PLANT HABIT:

☐ 3

1 = Determinate ('Gnome'; 'Braxton')

3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

2 = Semi-Determinate ('Will')

18. MATURITY GROUP:

☐ 5

1 = 000

2 = 00

3 = 0

4 = I

5 = II

6 = III

7 = IV

8 = V

9 = VI

10 = VII

11 = VIII

12 = IX

13 = X

19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

BACTERIAL DISEASES:

☐Bacterial Pustule (*Xanthomonas phaseoli* var. *sojensis*)☐Bacterial Blight (*Pseudomonas glycinea*)☐Wildfire (*Pseudomonas tabaci*)

FUNGAL DISEASES:

☐Brown Spot (*Septoria glycines*)Frogeye Leaf Spot (*Cercospora sojina*)☐

Race 1

☐

Race 2

☐

Race 3

☐

Race 4

☐

Race 5

☐

Other (Specify)

☐Target Spot (*Corynespora cassiicola*)☐Downy Mildew (*Peronospora trifoliorum* var. *manshurica*)☐Powdery Mildew (*Microsphaera diffusa*)☐Brown Stem Rot (*Cephalosporium gregatum*)☐Stem Canker (*Diaporthe phaseolorum* var. *caulivora*)

19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

FUNGAL DISEASES: (Continued)

☐ Pod and Stem Blight (*Diaporthe phaseolorum* var. *sojae*)

☐ Purple Seed Stain (*Cercospora kikuchii*)

☐ Rhizoctonia Root Rot (*Rhizoctonia solani*)
Phytophthora Rot (*Phytophthora megasperma* var. *sojae*)
☒ Race 1 ☐ Race 2 ☒ Race 3 ☒ Race 4 ☐ Race 5 ☐ Race 6 ☒ Race 7

☐ Race 8 ☐ Race 9 ☐ Other (Specify) _____

VIRAL DISEASES:

☐ Bud Blight (Tobacco Ringspot Virus)

☐ Yellow Mosaic (Bean Yellow Mosaic Virus)

☐ Cowpea Mosaic (Cowpea Chlorotic Virus)

☐ Pod Mottle (Bean Pod Mottle Virus)

☐ Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

Soybean Cyst Nematode (*Heterodera glycines*)
☐ Race 1 ☐ Race 2 ☐ Race 3 ☐ Race 4 ☐ Other (Specify) _____

☐ Lance Nematode (*Hoplolaimus Colombus*)

☐ Southern Root Knot Nematode (*Meloidogyne incognita*)

☐ Northern Root Knot Nematode (*Meloidogyne Hapla*)

☐ Peanut Root Knot Nematode (*Meloidogyne arenaria*)

☐ Reniform Nematode (*Rotylenchulus reniformis*)

☐ OTHER DISEASE NOT ON FORM (Specify): _____

20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

☐ Iron Chlorosis on Calcareous Soil

☐ Other (Specify) _____

21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

☐ Mexican Bean Beetle (*Epilachna varivestis*)

☐ Potato Leaf Hopper (*Empoasca fabae*)

☐ Other (Specify) _____

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

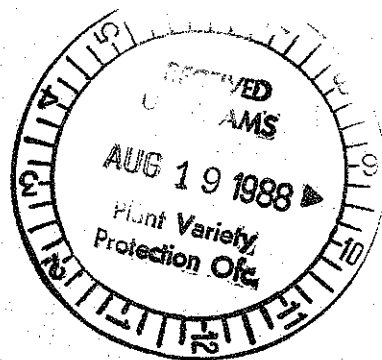
CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape		Seed Coat Luster	
Leaf Shape		Seed Size	
Leaf Color		Seed Shape	
Leaf Size		Seedling Pigmentation	

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/ POD
				CM Width	CM Length	% Protein	% Oil		
29725K Submitted	262	1.2	--	--	--	--	--	--	--
DSR-207 Name of Similar Variety	260	2.0	--	--	--	--	--	--	--

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A₂ in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.



8800221

'29725K'

Exhibit E:

Soybean cultivar '29725K' was originated and developed by Dairyland Research International a division of Dairyland Seed Company, Inc.

Latham Seed Co. has obtained rights to the cultivar '29725K' from Dairyland Research International by contract.